

plants of the same family ought necessarily to possess the same physiological properties.

M. Ozanam arrives at different conclusions from those of Prof. Bernard, and investigates the subject from a therapeutical point of view, as he has been engaged in doing for the last ten years. He describes six principal alkaloids in opium—namely, morphia, codeia, narcotina, opianine, narceia, and thebaina. Morphia is so well known that he says little of its effects. The therapeutical properties of opianine are but little known. Codeia is sometimes an excitant, sometimes a sedative, and sometimes it stupefies, according to the dose. Narcotina has a well-marked stimulant action, and produces an effect the reverse of that of morphia. Thebaina is an excitant of the cervical part of the spinal cord. Narceia is a valuable sedative, and appears to have a special action on the lumbar portion of the spinal cord. Thus opium is both a sedative and a stimulant; the morphia, the opianine, and the narceia are sedative; the narcotina and the thebaine are stimulant, and codeia stands between the two, partaking of both properties according to the dose.—*Brit. and For. Med.-Chir. Rev.*, Jan. 1865.

5. *Hypnotic Properties of Bromide of Potassium*.—Dr. DEBOUT relates (*Bull. Gén. de Thérap.*, Aug. 15, 1864) several cases in which great irritability was relieved by means of the bromide of potassium. In one case there was a stricture of the urethra which resisted the treatment by dilatation, because the irritability and febrile excitement were so great as to prohibit the introduction of the catheter with sufficient frequency and regularity. Dr. Debout was therefore induced to employ the bromide, in order, if possible, to cause anæsthesia of the urethral canal, so as to make it insensible to the injurious effects of the catheters. The salt was given in large doses, four grammes (about 3j) being taken every day. The success of the treatment exceeded all expectation, for as soon as the bromide had been taken, the catheters could be introduced, of greater and greater dimensions, without producing any bad symptoms. The most remarkable circumstance in the case was the stupefying action produced by the bromide, for although the patient had been unable to sleep for a month previous to the treatment, yet as soon as it was administered, and when he had taken only about half a drachm of the salt, he slept all night. Another case was one of neuralgia of the neck of the bladder, preventing the patient, who was a medical man, from riding on horseback and visiting his patients, the nature of the roads preventing him from walking. After a month's trial he lost the painful sensations of which he complained, and resumed his usual avocations; he stated also that he had proved the hypnotic properties of the bromide. In another case the bromide was used to allay an erethism of the pharynx and the neck of the bladder, and the patient was obliged to leave it off, because fifteen grains dissolved in water not only procured him sound sleep during the night, but on the next day he remained in such a state of somnolence as to be unable to attend to his business.

A writer in the *Union Médicale* (Oct. 13, 1864) denies that the bromide of potassium is a true hypnotic, but considers that it causes sleep by the deep sedative effect it produces upon the whole of the nervous system, and secondarily on the circulation. Phthisical patients, tormented by coughing and sweating, notwithstanding the use of opium, have obtained sleep by the means alluded to; and in two cases of organic disease of the heart, with rapidity and intermission of the pulse, præcordial anxiety and dyspnœa, M. Gubler was able, by means of the bromide, to reduce the pulse from 108 to 76, and to relieve the dyspnœa.

The properties of this salt may be summed up by stating that it is a simple moderator of nervous excitement, and that its elective action is specially exerted on the internal integument, the mucous membrane of the isthmus of the throat, that of the pharynx, and that of the genital passages. M. Vigoroux considers it the remedy *par excellence* for the nervous complaints which are so common in large cities, and the cause of which appears to him to be the excess of vascularity of a part of the nervous centres. The bromide, by diminishing the vascularity, becomes the antidote to this condition. Its presence in certain mineral springs explains their sedative action, and these springs may be usefully employed now that the cause of their action is known. Its operation appears to be antagonistic

to that of iodine, with which it ought not, therefore, to be therapeutically associated, unless it is intended to counteract the effects of the latter.—*Brit. and For. Med.-Chir. Rev.*, Jan. 1865.

6. *On the Action of the Tincture of Perchloride of Iron in the Cure of Renal and Urinary Affections.*—Dr. ARTHUR HILL HASSALL relates (*Lancet*, Dec. 31, 1864) some very interesting observations on this subject. "There are few remedies," he observes, "more frequently prescribed in the treatment of renal and urinary affections than is the tincture of perchloride of iron, formerly called muriated tincture of iron. The value of that remedy in a variety of such cases is undoubted, as in the albuminuria of Bright's disease, in hemorrhage from the kidney, bladder, or urethra, in spasmodic stricture, &c.

"The tincture of the perchloride of iron consists of two atoms of iron in combination with three of chlorine, dissolved in water to which rectified spirit has been added; and it possesses the properties of an astringent, tonic, and styptic, coagulating blood or albumen with which it is brought into contact, and constringing the vessels and tissues to which it is applied.

"Now, this astringent property is just that which a remedy ought to possess to be useful in the cases above referred to, and by it, it is usually supposed, it exerts its beneficial action; and certainly nothing would appear to be more plausible and more natural than this explanation.

"Having, after the administration of this remedy, repeatedly tested the urine for the purpose of detecting in it the presence of iron, and having failed to discover the faintest trace of the metal, I was led to doubt the correctness of this view, and was induced to institute some experiments, in order to put the matter to the proof.

"To a patient, T. L.—, labouring under an habitual urinary discharge, I administered for the period of more than a week a drachm of the tincture thrice daily: but, although I tested the urine on several occasions, in no instance could I detect the smallest trace of iron, notwithstanding that a pint of the urine was evaporated to a small bulk before being examined.

To a patient now in the Royal Free Hospital, Charles S.—, who is suffering from an extravasation of blood, three drachms of the tincture were administered on two consecutive days. The whole of the urine passed in the twenty-four hours of each day was collected, a pint of each sample evaporated to a small bulk, and tested as before, but with a similar negative result.

"Lastly, I myself took in the course of a day three drachms of the tincture; the urine passed in the twenty-four hours being collected and analyzed, not only on the day on which the medicine was taken, but on the preceding and succeeding days. Still no iron was found.

"I could enumerate several other instances in which iron had been taken and the urine analyzed without even traces of the metal being subsequently discovered. The examples, however, I have quoted are sufficient to show that the tincture of perchloride of iron does not produce its beneficial effects, as generally supposed, in restraining the amount of albumen or of blood discharged from the kidney or other portion of the genito-urinary mucous track by coming in contact with the seat of the lesion and by its action as an astringent.

"How, then, does this remedy act? That much of the iron contained in the sesquichloride does not find its way into the circulation at all, but escapes from the system with the undigested portions of the food, is certain; the black discoloration of the feces under the use of this tincture, and indeed, I believe, under all the preparations of iron, is well known, the colour being due to a combination of the iron with a portion of the sulphur of the food—sulphuret of iron being thus formed. It might therefore be very plausibly presumed that while the greater part of the iron is thus thrown off by the bowels without having been absorbed at all, the hydrochloric acid, being set free, enters the circulation, is eliminated by the kidneys, and so comes in contact with the seat of lesion; and that it is to the acid, and not to the iron, that the benefit is to be attributed. But if this view be correct, it is capable of being substantiated by experiment; and with this object I administered to two persons drachm doses, repeated thrice daily, of the perchloride; the urine of the twenty-four hours being col-